



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/796,716	03/08/2004	Ren-Kang Chiou	SUP-002-2	1801

22888 7590 06/20/2006

BEVER HOFFMAN & HARMS, LLP
TRI-VALLEY OFFICE
1432 CONCANNON BLVD., BLDG. G
LIVERMORE, CA 94550

EXAMINER

BUI, HUNG S

ART UNIT PAPER NUMBER

2841

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/796,716	Applicant(s) CHIOU ET AL.	
	Examiner Hung S. Bui	Art Unit 2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/09/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of restriction species in the reply filed on 03/28/2006 is acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 5-9, 11, 13, 17-21 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Kilmer et al. [US 5,497,297].

Regarding claims 1 and 13, Kilmer et al. disclose a PC card kit (figures 3a-8), for housing a printed circuit board (figures 2a, 2b, PCB) assembly including a PCB (200, 201) having front and back edges and at least one connector (225) mounted on the back edge of the PCB, the frame comprising:

- a frame (224, figure 6a-6b) including first and second parallel side rails (249) and an end rail extending between first ends of the first and second side rails (figure 3b);
- a first panel (226) including first connection structures (250) for securing the first panel to a top surface of the frame (figure 6a);

- a second panel (226) including second connection structures (250) for securing the second panel to a bottom surface of the frame, wherein the first and second connection structures are substantially identical (figures 6a, 6b).

Regarding claims 5 and 17, Kilmer et al. disclose wherein the frame defines an elongated first groove (figures 6a, 6b) including portions extending along a first surface of at least one of the first and second side rails;

wherein first panel including a cover plate and side walls (figures 4a-4c) respectively extending from opposite side edges of the cover plate; and

wherein the side walls are arranged to fit within the portions of the elongated first groove when the first panel is mounted onto the frame (figures 6a, 6b).

Regarding claims 6 and 18, Kilmer et al. further disclose wherein the frame comprises a plurality of through holes (figures 6a, 6b) formed in the elongated first groove;

wherein the first connection structures comprise a plurality of connection fingers (255) extending from each of the side walls (figures 6a, 6b); and

wherein the connection fingers are arranged such that each connection finger extends into a corresponding through hole when the first panel is mounted onto the frame (figures 6a, 6b).

Regarding claims 7 and 19, Kilmer et al. disclose wherein each connection finger comprises an elongated member having a first end connected to a corresponding side wall (figures 6a, 6b), and an engagement member extending from the elongated

Art Unit: 2841

member, wherein the engagement member is disposed to fixedly engage a portion of the frame when the first panel is mounted onto the frame and the each connection finger is inserted into a corresponding through-hole (figures 6a, 6b).

Regarding claims 8 and 20, Kilmer et al. disclose wherein an end portion of the elongated first groove extends along an upper surface of the end rail, wherein the first panel further comprises an end wall extending from an end edge of the cover plate, and wherein the end wall is arranged to fit within the end portion of the first groove when the first panel is mounted onto the frame (figures 3a, 3b, 6a, 6b).

Regarding claims 9 and 21, Kilmer et al. disclose wherein the frame further defines elongated second groove including portions extending along a second surface of at least one of the first and second side rails, wherein second panel includes a cover plate (226) and side walls (250, figure 4a) respectively extending from opposite side edges of the cover plate, and wherein the side walls are arranged to fit within the elongated second groove when the second panel is mounted onto the frame (figures 6a, 6b).

Regarding claims 11 and 25, Kilmer et al. disclose wherein the first and second connection structures comprise connection fingers, wherein each connection finger comprises an elongated member having a first end connected to the associated side wall, and an engagement member extending from the resilient member, wherein the engagement member is disposed to fixedly engage a portion of the frame when the first and second panels are mounted onto the frame and the each connection finger is inserted into a corresponding through-hole defined in the frame (figures 6a, 6b).

4. Claims 1-4 and 13-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Simmons et al. [US 5,339,222].

Regarding claims 1 and 13, Simmons et al. disclose a PC card kit (figures 1-2), for housing a printed circuit board (figure 2) assembly including a PCB (20) having front and back edges and at least one connector (22) mounted on the back edge of the PCB, the frame comprising:

- a frame (14, figure 2) including first and second parallel side rails (30, 32) and an end rail extending between first ends of the first and second side rails (figures 2-3);
- a first panel (16) including first connection structures (50, 52) for securing the first panel to a top surface of the frame (figures 2-3);
- a second panel (12) including second connection structures (40, figure 3) for securing the second panel to a bottom surface of the frame, wherein the first and second connection structures are substantially identical (figure 2).

Regarding claims 2 and 14, Simmons et al. disclose wherein the frame defines an open end (an open on right end 20 of the printed circuit board, figure 2) located at second ends of the first and second side rails, and wherein the first and second side rails define a longitudinal slot for slidably receiving the printed circuit board of the PCB assembly (figure 2).

Regarding claims 3 and 15, Simmons et al. disclose wherein each of the first and second side rails defines a side portion of the longitudinal slot receiving side edges of the printed circuit board when the printed circuit board is fully inserted into the frame (figure 2).

Regarding claims 4 and 16, Simmons et al. disclose wherein the end rail defines an end portion of the longitudinal slot for receiving a front edge of the printed circuit board when the printed circuit board is fully inserted into the frame (figure 2).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10, 22-24 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilmer et al. in view of Perkins [US 5,319,516 or Re 35,832].

Regarding claims 10, 22 and 27 (refer to claims 1 and 13), Kilmer et al. disclose the instant claimed invention except for wherein the first and second metal panels being mounted to the frame such that the first panel is electrically isolated from the second panel.

Perkins discloses a printed circuit card assembly (figure 3) having a frame (16), wherein the frame comprises an electrically insulating material, and wherein first and

Art Unit: 2841

second metal panels (52, 54) are mounted to the frame such that the first panel is electrically isolated from the second panel (figure 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the engagement design of Perkins in Kilmer et al., for the purpose of preventing electronic shock that is happened to damage a printed circuit card.

Regarding claims 23-24 and 28, Kilmer et al. disclose the instant claimed invention except for the connector of the printed circuit board assembly including first and second grounding contacts, each of the grounding contact connects to each of covers.

Perkins further discloses the printed circuit card having a grounding contact assembly (80, figure 5), being connected to both covers of the printed circuit card covers (column 3, lines 12-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the grounding contact design of Perkins in the printed circuit board assembly of Kilmer et al., for the purpose of providing shielding electromagnetic interference (EMI).

7. Claims 12 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kilmer et al. in view of Fun et al. [US 6,166,913].

Regarding claims 12 and 26, Kilmer et al. disclose the instant claimed invention except for a support having first and second side arms arranged to be received into corresponding slot portion of the frame.

Fun et al. disclose a printed circuit card assembly (figure 1) having at least one cover (21) including a plurality of support (26), wherein the support has first and second side arms (261) arranged to be received into corresponding slot portion (27) of a frame 231, figure 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the support design of Fun et al. in Kilmer et al., for the purpose of providing completely locking the cover to the frame.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung S. Bui whose telephone number is (571) 272-2102. The examiner can normally be reached on Monday-Friday 8:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571) 272-1957. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

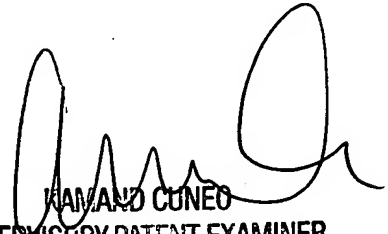
Art Unit: 2841

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

6/09/06

Hung Bui

Art Unit 2841



RAMAND CUNEO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800